

U.S. ENVIRONMENTAL PROTECTION AGENCY
 POLLUTION/SITUATION REPORT
 San Juan River Response - Removal Polrep



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 Region IX**

Subject: **POLREP #4**
San Juan River Response

Shiprock, NM
Latitude: 36.8704828 Longitude: -108.7892506

To: Robert Wise, EPA Region 9

From: Kathleen Dillon, Situation Unit Leader

Date: 8/16/2015

Reporting Period:

1. Introduction

1.1 Background

Site Number:	Contract Number:
D.O. Number:	Action Memo Date:
Response Authority:	Response Type:
Response Lead:	Incident Category:
NPL Status:	Operable Unit:
Mobilization Date:	Start Date:
Demob Date:	Completion Date:
CERCLIS ID:	RCRIS ID:
ERNS No.:	State Notification:
FPN#:	Reimbursable Account #:

1.1.1 Incident Category

1.1.2 Site Description

The Gold King Mine near Silverton, Colorado is a historic gold mine at approximately 11,300' elevation. The mine has a continuous discharge of acidic mine drainage that is a significant contributor of manganese, zinc, copper, and cadmium into the Cement Creek drainage of the Animas River watershed. The Gold King Mine has not had maintenance of the mine workings since 1991, and the workings have been inaccessible since 1995 when the mine portal collapsed.

EPA Region 9 is focused on a stretch of the San Juan River extending from Farmington, NM to Mexican Hat, UT.

1.1.2.1 Location

San Juan County, NM and Navajo Reservation. The Animas River flows into the San Juan River at

Farmington, NM. After the Animas River meets the San Juan River, the San Juan River continues to flow west through parts of New Mexico, Colorado, and Utah.

1.1.2.2 Description of Threat

Mine waste water was released into Cement Creek and the Animas River. The volume of the release based on US Geological Survey (USGS) Cement Creek gauging station is estimated at three million gallons. The initial environmental concern was the pulse of contaminated water containing sediment and metals discharged in Cement Creek which flows into the Animas River through Durango, Colorado, and into New Mexico where it joins the San Juan River before flowing into Utah. The river is also used for recreational purposes, including fishing and rafting, and is an important cultural resource for the Navajo Nation.

The leading edge of the release reached the New Mexico border on August 8, 2015 where it eventually discharged into the San Juan River.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Aerial and ground reconnaissance indicates that the plume associated with the Gold King Mine release has dissipated downstream. There is no leading edge of contamination visible in downstream sections of the San Juan River or Lake Powell.

EPA Region 9 is collecting and assessing water quality from the San Juan River from La Plata Highway in New Mexico to Mexican Hat in Utah. Water sampling is occurring, and pH levels and dissolved concentrations of metals are being monitored.

1.2 Incident Objectives

1. Safety

- Provide safe working environment for all response personnel.
- Identify safety issues and monitor adherence to Health and Safety Plan
- Ensure personnel receive adequate rest and time off

2. Sampling

- Daily water and sediment sampling from 11 designated locations along the San Juan River
- Sampling from Lake Powell
- synchronize sampling data and information with Area Command

3. Water Replacement

- Work with Navajo representatives to staff water points and organize distribution

4. Public Outreach

- Coordinate public forum at which Navajo tribal leaders and community members can address Incident Command representatives.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Daily operations are focused around gathering water and sediment samples from 11 designated locations in the San Juan River. The Glen Canyon ICP is overseeing sampling in the vicinity of Lake Powell.

Water trucks to address Navajo agricultural and livestock needs have been secured and will be continuing to deliver water to designated locations. The Unified Command has also identified a need on the Navajo reservation to provide feed for livestock.

2.1.2 Response Actions to Date

Sampling Branch

EPA Region 9 initiated water and sediment sampling efforts on August 9, 2015, to assess the impacts of the release at the Gold King Mine on the San Juan River. Starting on August 9, samples were gathered from the shoreline of the following 11 designated locations along the San Juan River:

New Mexico

San Juan River at LaPlata Highway (SJLP)
 PNM Intake (SJFP)
 San Juan River at Hogback (SJHB)
 San Juan River at Shiprock (SJSR)
 San Juan DS from Shiprock (SJDS)
 San Juan River at Four Corners (SJ4C)

Utah

San Juan River at McElmo Creek (SJME)
 San Juan at Montezuma Creek (SJMC)
 San Juan River at Bluff Bridge (SJBB)
 San Juan River at Mexican Hat (SJMh)
 McElmo Creek Tributary (MECT)

Sample totals are summarized below:

August 8 - 4 water samples (SJLP, SJFP, SJHB & SJSR)
 August 9 - 13 water samples (all sites)
 August 10 - 12 water samples, 11 sediment samples (all sites)
 August 11 - 13 water samples, 13 sediment samples (all sites)
 August 12 - 13 water samples, 13 sediment samples (all sites)
 August 13 - 12 water samples, 12 sediment samples (all sites)
 August 14 - 12 water samples, 12 sediment samples (all sites)
 August 15 - 12 water samples, 12 sediment samples (all sites)

Three semi-permanent monitoring systems will be put in place today to keep a constant gauge on San Juan water quality information.

There have been 0 requests for well samples and 0 requests for samples from diversion channels. This will be discussed further at the meeting with Navajo Nation today and will be noted in tomorrow's report.

Community Relations Branch

Region 9 continues daily meetings at designated Navajo Chapters. Chapter meetings are summarized below:

8/10 - Oljeto, Aneth
 8/12 - Shiprock
 8/14 - Oljeto, Aneth
 8/15 - Hogback, Nenahnezad, San Juan, Upper Fruitland, Cudei

Yesterday, community Involvement Coordinators attended a chapter meeting in Nenahnezad. Chapters including Upper Fruitland, Hogback, and San Juan were also in attendance. This is the first time EPA has presented to these communities as a part of this emergency response.

The meeting was well attended, with between 150-200 people, and lasted upwards of 5 hours. The meeting was attended by Navajo Nation officials, Chapter officials, and the press as well as community members. EPA was able to give a statement and discuss updates, including the release of some data today. Statements were also made by other representatives as well as community members (again, more information to come).

The field team emphasized that issues related to the claims forms are a very large concern and represent one of the biggest reasons EPA's relationship with communities is currently fractured.

Chapter meetings are scheduled today with the Mexican Water, Red Mesa and Tec Nos Pas chapters.

A meeting with the Farmington IC and Window Rock representatives will be held today to discuss a Unified Command.

Water and Feed Delivery Branch

A summary of water tank delivery for use for livestock and agriculture is as follows:

8/13 - 11,000 gallons of water delivered to Hal Chita, UT, 7,000 gallons of water delivered to Shiprock, NM

8/14 - 12 tanks (each 16,000 gallons) staged throughout Shiprock chapter

8/15 - 13 tanks (each 16,000 gallons) staged throughout various chapters of Navajo Nation. GPS coordinates and specific information regarding location of these tanks is being processed this afternoon

A summary of feed delivered for livestock is as follows:

8/14 - 384 bales delivered to Gaadiiahi chapter

Two additional bales anticipated to be delivered tomorrow to two chapters.

Drinking Water System Impacts

No known water systems in Region 9 have been impacted. Efforts to reach the Navajo Tribal Utility Authority this weekend to gather more information on this matter have not been successful but will continue tomorrow.

Glen Canyon, Arizona ICP

A second ICP was established on August 13 at the National Park Service Glen Canyon Headquarters. The National Park Service is providing EPA Region 9 with office space, logistical support, and housing. The focus of this ICP will be sampling Lake Powell in addition to performing community outreach.

Yesterday, EPA and START conducted sampling of the San Juan Arm of Lake Powell. Vessel to conduct these samples was provided by NPS Glen Canyon. Water and sediment samples were collected at 6 locations throughout the San Juan Arm.

Today the sampling team will collect samples from the main stem of Lake Powell between Dangling Rope and Glen Canyon Dam.

Other Notes

Yesterday, the State of Utah lifted its advisory for crop irrigation and livestock watering.

Preliminary data was processed for water samples from last Wednesday and was made available for review yesterday.

2.2 Planning Section

2.2.1 Anticipated Activities

Sediment and water sampling of the eleven data points on the San Juan River will continue today. Two samples along San Juan River (Mexican Hat and Bluff Bridge) will be gathered from the middle of the channel via small boat. The other 9 sample sites will continue to be gathered from the shoreline.

Sampling in the vicinity of Lake Powell will also continue out of the Glen Canyon ICP.

Yesterday, a more robust water distribution system will be established throughout Navajo Nation. Water

tanks are now staged at 13 total points throughout Navajo Nation with a capacity of 32,000 gallons of water at each location except for one location that has a capacity of 16,000 gallons.

Additional representatives from the EPA's community relations team have arrived at the Farmington ICP. These members will be meeting with the Mexican Water, Rd Mesa, Aneth, Mexican Hat, and Tec Nos Pos chapters today. A fact sheet has been established that will be distributed throughout Navajo Nation and will provide contact information for community members to reach Command representatives.

2.2.1.1 Planned Response Activities

Continued daily water and sediment sampling is planned.

Refilling water tanks staged throughout Navajo Nation will continue as needed.

Community Outreach Branch at Farmington ICP will continue outreach with members of Navajo nation.

2.2.1.2 Next Steps

Improve relationship with Navajo Nation.

2.2.2 Issues

No current issues.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

2.4.1 Narrative

Yesterday, there was a burn rate of \$6,485.79 with a weekly burn rate of \$45,400.52. On average a total of \$4,302.23 is spent on personnel per day.

A total of \$205,308.50 is committed for upcoming operations.

2.5 Other Command Staff

2.5.1 Safety Officer

Personal Flotation Devices must be worn by all members of sampling teams while underway on any watercraft. When performing boat operations, a representative from each vessel must contact the Situation Unit Leader at intervals of no more than two hours stating location and current operations. Any lightning sighting will cause a stop to operations.

With weather being forecasted into the mid 90s, hydration is of paramount importance. Additionally, much of the terrain surrounding the river is uneven and rocky. Responders should transit these areas.

While transiting throughout the region, responders should be mindful of the potential for contact with wildlife. Scorpions, snakes, and other similar animals raise a potential for injury.

2.5.2 Liaison Officer

Liaison officers are continuing outreach with Navajo community members and representatives of the Navajo Tribe.

2.5.3. Weather Forecast

Weather forecast for Sunday, August 16

FARMINGTON AREA

Today

A mix of sun and clouds with a high of 96, low of 63 and 20% chance of precipitation. Wind coming out of the east at 10 miles per hour.

Tonight

No precipitation tonight. Partly cloudy, with a low around 63.

Tomorrow

Sunny with a high of 96, low of 61. 20% chance of precipitation.

3. Participating Entities

3.1 Area Command

EPA Region 9 is coordinating with EPA Regions 6 and 8, Navajo Nation, and the states of Colorado, New Mexico, Utah, and Arizona. The EPA Region 9 is working with the Navajo Nation to evaluate possible impacts to the Tribe. Potentially impacted water systems have been notified, and precautions are in place to ensure drinking water is protected. The EPA and New Mexico Environmental Department are providing assistance to community water systems and closely monitoring the situation. EPA Region 9 has contacted the Bureau of Indian Affairs regarding potential impacts to the Navajo Nation and is currently working with Navajo liaisons.

3.2 Unified Command and Cooperating Agencies

The UC includes EPA Region 9 and United States Coast Guard. Bret Moxley has assumed the role of Incident Commander.

4. Personnel On Site

EPA - 8
EPA START - 8
ERRS - 5
USCG - 8
Navajo Liaisons - 2

5. Definition of Terms

No information available at this time.

6. Additional sources of information

6.1 Internet location of additional information/report

www.epa.gov/goldkingmine

7. Situational Reference Materials

No information available at this time.